

II. Description of the Marine Terminal

A. Wharf

The Shore Terminals wharf is located in the northeast portion of the Bulls Head Channel approximately one mile east of the Benicia Bridge. It was built in 1973 as a barge and tanker unloading facility and operates 24 hours a day, 365 days per year. Products transferred include crude oil, gasoline, gasoline components, diesel fuel, jet fuel, residual fuel oil and methyl tertiary butyl ether (MTBE).

The terminal consists of a 40-foot by 100-foot concrete wharf supported by prestressed concrete piles that is connected to land by a 1,700 foot long elevated trestle carrying an 11 foot wide roadway and a pipe rack (see Figure 3). There are two breasting dolphins (sturdy pilings for protecting the wharf from moored vessels) and one mooring dolphin (piling to attach vessel's mooring line) on either side of the wharf connected by a walkway. A six-inch high curb surrounds the wharf deck with several drains that are connected to a 25-barrel capacity sump.

Historically the wharf has handled vessels with displacements up to 96,000 dead weight tons (DWT). The most recent Coast Guard approved Manual prepared by Wickland and adopted by Shore Terminals for the facility limits present wharf usage to vessels up to 950 feet in length displacing 80,000 DWT. An engineering study was completed in 1994 to determine the actual maximum handling capacity of the mooring dolphins and wharf. The study indicates that the design of the wharf will accommodate vessels up to 150,000 DWT.

There are three hydraulically operated unloading arms located on the wharf, including two 16-inch arms used to load or unload vessels. One of the 16 inch arms is used for "dark service" (crude oil or fuel oil) with connections to shore tanks through two insulated lines, one 30 inch and one 12 inch. The other arm is in "clean product" service (gasoline, diesel, oxygenates), with connections to shore tanks through two 12 inch lines.

Another hydraulically operated unloading arm is located on the wharf. This 10-inch arm is permitted to handle both loading and unloading of clean products and the collection and recovery of displaced vapors from vessels during loading operations, but is actually used only as the primary vapor collection device. Also available is an optional 10-inch fixed marine vapor hose, which is used as a back-up to the line mentioned above. The displaced vapors are carried through a 12-inch vapor recovery line to the onshore Marine Terminal Oxidizer.